



(19)

Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 807 415 A3

(12)

## **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**12.08.1998 Bulletin 1998/33**

(51) Int. Cl.<sup>6</sup>: A61B 17/34, A61B 17/02

(43) Date of publication A2:  
19.11.1997 Bulletin 1997/47

(21) Application number: 97107527.0

(22) Date of filing: 07.05.1997

(84) Designated Contracting States:  
DE FR GB

(30) Priority: 09.05.1996 JP 114940/96  
02.08.1996 JP 204495/96  
15.11.1996 JP 304323/96  
17.12.1996 JP 336810/96  
11.04.1997 JP 92649/97  
01.05.1997 JP 113978/97

(71) Applicant:  
**Olympus Optical Co., Ltd.**  
**Tokyo (JP)**

(72) Inventors:  
• Kogasaka, Takahiro  
Hachioji-shi, Tokyo (JP)

- Ogawa, Akihisa  
Hachioji-shi, Tokyo (JP)
  - Nakada, Akio  
Hachioji-shi, Tokyo (JP)
  - Kimura, Shuichi  
Hino-shi, Tokyo (JP)
  - Kobayashi, Norio  
Kokubunji-shi, Tokyo (JP)
  - Kuramochi, Makoto  
Minato-ku, Tokyo (JP)

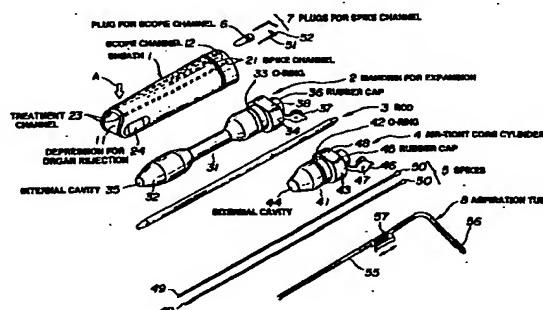
(74) Representative:  
Kahler, Kurt, Dipl.-Ing.  
Patentanwälte  
Kahler, Käck, Fiener et col.,  
Vorderer Anger 268  
86899 Landsberg/Lech (DE)

(54) A cavity retaining tool for bone surgery, a cavity retaining tool for general surgery, an endoscopic surgery system involving the use of a cavity retaining tool, and a procedure for surgery

(57) The cavity-retaining tool for bone surgery of this invention comprises: a cavity-retaining sheath (1) which is inserted into the body and forms a cavity to act as a work space for bone surgery; a treatment channel (11) which is placed in the cavity-retaining sheath (1), and guides treatment tools necessary for the treatment of a bone into the space for bone surgery; an observation tool which is attached to the cavity-retaining sheath (1), and by which to observe the operation field within the space for bone surgery; and a fitting means (5, 21) which is placed at the tip of the cavity-retaining sheath (1), and fits the tip of the cavity-retaining sheath (1) to a bone. As an extension, the cavity-retaining tool for surgery comprises: a cavity-retaining tool to retain a cavity for surgery works in the body; and a soft cylinder member which communicates with the cavity retained by the cavity-retaining means and interconnects the cavity with the space outside the body. As a further extension, the endoscopic surgery system involving the use of the cavity-retaining tool comprises: a cavity-retaining tool to retain a cavity in body tissues; and at least a port which is led to the cavity, and allows the port and the cavity to

communicate in the body.

FIG.1





European Patent  
Office

## PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 97 10 7527  
shall be considered, for the purposes of subsequent  
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 295 994 A (BONUTTI PETER M) 22 March 1994	41-45, 49,52, 53,57-62	A61B17/34 A61B17/02
A	* the whole document *	64-67	
X	US 5 454 365 A (BONUTTI PETER M) 3 October 1995	41,42, 44-47, 50,53, 54, 76-78, 81,86	
A	* column 1, line 9 - column 3, line 8; figure 29 * * column 6, line 50 - column 7, line 67; figures 16-19 *	1,19,20, 31,34,39	
X	WO 92 21292 A (ORIGIN MEDSYSTEMS INC) 10 December 1992	68,69, 72,74, 76-78, 80-82, 85,86	
A	* the whole document *	70,71, 79,83	
	---	-/-	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A61B
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or some or all of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for the following claims:</p> <p>Claims searched completely : <b>1-86</b></p> <p>Claims searched incompletely :</p> <p>Claims not searched : <b>87-92</b></p> <p>Reason for the limitation of the search: <b>Article 52 (4) EPC - Method for treatment of the human or animal body by surgery</b></p>			
Place of search <b>BERLIN</b>	Date of completion of the search <b>19 May 1998</b>	Examiner <b>Jameson, P</b>	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			



European Patent  
Office

## PARTIAL EUROPEAN SEARCH REPORT

Application Number  
EP 97 10 7527

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.6)
			TECHNICAL FIELDS SEARCHED (Int.CI.6)
X	WO 94 03114 A (REDMOND RUSSELL J ; VIDAL CLAUDE A (US)) 17 February 1994 * the whole document * ---	76-79, 81,83	
X	US 4 984 564 A (YUEN FRANK) 15 January 1991 * the whole document * ---	41-44,51	
X	DE 41 33 298 A (STROEMER CHRISTIAN) 15 April 1993 * the whole document * ---	1,16,19, 39	
P,X	US 5 569 290 A (MCAFEE PAUL C) 29 October 1996 * the whole document * ---	1,18	
A		40	TECHNICAL FIELDS SEARCHED (Int.CI.6)
X	WO 95 32663 A (KIETURAKIS MACIEJ J) 7 December 1995 * abstract; figure 1 * A * page 7, line 22 - page 7, line 30 * A * page 2, line 25 - page 3, line 35 * A * page 8, line 18 - page 8, line 30 * ---	75 1 16 18,19 29,30	
Y	DE 42 34 990 A (ETHICON GMBH) 21 April 1994  * column 3, line 36 - column 3, line 63; figure 1 * ---	41,42, 44-47, 57-59, 63,65	
Y	DE 43 18 950 C (ETHICON ENDO SURGERY EUROP GMB) 29 September 1994 * the whole document * ---	41,42, 44-47	
Y	EP 0 614 647 A (SMITH & NEPHEW RICHARDS INC) 14 September 1994  * the whole document * ---	41, 57-59, 63,65	
		-/-	



European Patent  
Office

## PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 97 10 7527

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	FR 2 701 379 A (DESTANDAU JEAN) 19 August 1994 * abstract; figure 2 * ---	1	
A	WO 95 22285 A (SMITH & NEPHEW RICHARDS INC) 24 August 1995 * page 9, line 8 - page 9, line 11; figure 3 *	48	
A	EP 0 610 099 A (TRIGONON INC) 10 August 1994 * abstract; figure 1 * -----	84	



European Patent  
Office

Application Number

EP 97 10 7527

#### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

#### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet 8

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



X | LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1 - 40:  
A cavity retaining tool for bone surgery comprising sheath, treatment channel, observation means and fitting means.
2. Claims 41 - 67:  
A cavity retaining tool for surgery comprising cavity retaining means and soft cylinder member.
3. Claims 68 - 74:  
An endoscopic surgery system comprising cavity retaining means and a port with interconnecting means.
4. Claim 75:  
A cavity retaining member comprising cavity retaining means and guide member.
5. Claims 76 - 86:  
An endoscopic surgery system comprising cavity retaining means and cavity expanding means.